## (19) World Intellectual Property Organization

International Bureau



# 

# (43) International Publication Date 20 October 2005 (20.10.2005)

### **PCT**

# (10) International Publication Number WO 2005/096836 A1

(51) International Patent Classification<sup>7</sup>: A23K 1/16, A61K 31/192, A61P 31/04

(21) International Application Number:

PCT/CA2005/000517

(22) International Filing Date: 6 April 2005 (06.04.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/559,439 6 April 2004 (06.04.2004) U

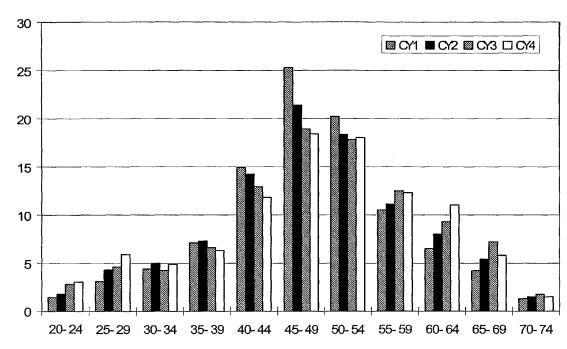
- (71) Applicant (for all designated States except US): UNI-VERSITY OF SASKATCHEWAN [CA/CA]; P.O. Box 5000 RPO University, 110 Gymnasium Place, Saskatoon, Saskatchewan S7N 4J8 (CA).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CLASSEN, Henry, L. [CA/CA]; 235 Sylvian Way, Saskatoon, Saskatchewan

S7H 5G1 (CA). **QIAO, Hongyu** [CA/CN]; 918 Jia Qian Road, Nan Xiang, Jia Ding District, Shanghai 201802 (CN).

- (74) Agents: MARSMAN, Kathleen, E. et al.; Borden Ladner Gervais LLP, World Exchange Plaza, 100 Queen Street, Suite 1100, Ottawa, Ontario K1P 1J9 (CA).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

### (54) Title: SINAPIC ACID SUPPLEMENTATION



(57) **Abstract:** An animal feed composition for monogastric non-human animals is disclosed comprising supplemental sinapic acid or derivatives thereof. Sinapic acid may be supplemented at a level of from 0.0005% to 3% of the feed composition by weight. The feed composition has the beneficial effect of promoting favourable intestinal microbial ecology by reducing pathogenic microbial populations, increasing favourable microbial populations, and increasing performance and growth characteristics in livestock animals.



### WO 2005/096836 A1

European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,

### **Declarations under Rule 4.17:**

GQ, GW, ML, MR, NE, SN, TD, TG).

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA,

ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,

of inventorship (Rule 4.17(iv)) for US only

GW, ML, MR, NE, SN, TD, TG)

### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.